simulated instruments found on the flat panel display and for displaying indicia that said data is being received related to the aircraft system parameters from corresponding aircraft instruments;

a first central processor for receiving said data from the aircraft instruments measuring said aircraft system parameters;

a first graphics generator operatively coupled to the first central processor for generating a first set of color data as a function of the data received by the first central processor and for outputting the first set of color data to the flat panel display so that the flat panel display can form the simulated instruments and the indicia;

a second central processor for receiving said data from the aircraft instruments measuring said aircraft system parameters; and

a second graphics generator operatively coupled to the second central processor for generating a second set of color data as a function of the data received by the second central processor and for outputting the second set of color data to the flat panel display in a different color than said first set of color data so that the flat panel display can form with the output from the first graphics generator the simulated instruments and the indicia wherein said indicia is of another color different from the colors of said first and second sets of color data,

wherein when either of the first and second set of color data is not output to the flat panel display, the indicia on the flat panel display is in a color different from said another color.

13. A circuit for controlling a flat panel display that displays on simulated aircraft instruments data related to aircraft system parameters gathered from aircraft instruments and indicia that show that the data is being received by the flat panel display, comprising:

a first central processor for receiving said data from the aircraft instruments measuring said aircraft system parameters;

a first graphics generator operatively coupled to the first central processor for generating a first set of color data as a function of the data received by the first central processor and for outputting the first set of color data to the flat panel display so that the flat panel display can form the simulated instruments and the indicia;

a second central processor for receiving said data from the aircraft instruments measuring said aircraft system parameters;

a second graphics generator operatively coupled to the second central processor for generating a second set of color data as a function of the data received by the second central processor and for outputting the second set of color data to the flat panel display in a different color than said first set of color data so that the flat panel display can form with the output from the first graphics generator the simulated instruments and the indicia wherein said indicia is of another color different from the colors of said first and second sets of color data,

wherein when either of the first and second set of color data is not output to the flat panel display, the indicia on the flat panel display is in a color different from said another color; and

a third central processor for receiving data from aircraft instruments related to the aircraft systems parameters and for interrogating the aircraft systems with simulated flight data on a statistical basis to build a database of statistical measurements of the aircraft systems for maintenance and diagnostic purposes.

Insert the following new claims 19 to 21:

19. A color flat panel display for displaying, to a crew in a cockpit in an aircraft, simulated aircraft flight instruments and aircraft system parameters related to data from aircraft instruments and indicia for indicating integrity of display data being received for display by the color flat panel display, comprising:

a display screen on which at least one of the simulated aircraft instruments and said aircraft system parameters are displayed in a first color and said indicia are normally displayed in a single, predetermined, unchanging second color different from said first color such that any color change in said indicia from said second color as a result of a change in indicia data fed to the display screen visually indicates reduced operating integrity of the display data and thereby visually alerts the crew to a possible problem with the displayed aircraft system parameters.

20. A color flat panel display in accordance with claim 19, wherein said indicia define a border of at least one of the simulated aircraft instruments displayed on said flat panel display.

21. A color flat panel display in accordance with claim 19, wherein said indicia define a pointer of at least one of the simulated aircraft instruments displayed on said flat panel display.